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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,561	02/08/2002	Klaus Hartig	44046.203.180.2	9865
22859 7590 12/21/2006 INTELLECTUAL PROPERTY GROUP FREDRIKSON & BYRON, P.A. 200 SOUTH SIXTH STREET SUITE 4000 MINNEAPOLIS, MN 55402			EXAMINER CANFIELD, ROBERT	
			ART UNIT 3635	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		12/21/2006	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding..**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/071,561

Applicant(s)

HARTIG ET AL.

Examiner

Robert J. Canfield

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 June 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12,14,15,18-25 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) 21-25 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12,14,15,18-20 and 45-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. This Office action is in response to the amendment filed 06/29/06. Claims 12, 14, 15, 18-25 and 45-54 are pending with claims 21-25 withdrawn. Claims 1-11, 13, 16, 17 and 26-44 are canceled.

2. The replacement drawing sheets filed 06/29/06 are accepted.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 12, 14, 15, 18-20, and 45-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

There is no support for the added language "formed of a material that does not corrode when exposed to air and moisture". Page 10 of the specification recites "formed of a material that does not readily corrode when exposed to air and moisture". There is a difference in scope of what is claimed and what is supported by the specification. This is a new matter rejection.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 12, 14, 15 and 45-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel (5,873,203) in view of Cathers (4,587,769).

In regard to claim 12, Thiel discloses a multiple pane insulating glass unit 20 comprising two spaced apart panes 22, 24 and a spacer 38 joining confronting, inner peripheral surfaces of the panes, the spacer and the confronting surfaces of the panes together defining a between-pane space, at least one of the panes having an outer surface bearing a functional coating 50 or 52 (column 6, lines 4 and 5). The outer coating is a photocatalytic coating comprising titanium oxide (a non-silver based coating), abstract and column 11, lines 19-26. This coating is considered to be a material that does not corrode when exposed to air and moisture to the same extent as applicants (Note claims 14 and 15 depend from 12 and since Thiel provides the coating of claims 14 and 15 it inherently must meet that of claim 12). Thiel does not specifically disclose that said outer surface has a peripheral region that is substantially free of the functional coating. Cathers teaches that it is known to remove coatings from glass sheets where adhesives or sealants are applied in order to provide direct contact with the glass to prevent a reaction with the film, column 1, lines 26-34, and column 3, lines 56-67. It would have been obvious to one having ordinary skill in the art at the time the invention was made to remove the coating from the outer surface peripheral edge of Thiel's glass sheets, because when the glass unit is placed in a frame, it will be able to be adhered to said window frame around the coating free peripheral edge portion.

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Therefore, one will not have to worry about a reaction taking place between the adhesive and the coating as discussed by Cathers.

Thiel further teaches that said coating could be a low emissivity coating, column 6, line 9. Therefore, since Thiel discloses coatings 42, 44, 50 and 52 on the inner surfaces, the low- emissivity coating is on the inner surface. Further, the examiner would like to point out that the applicant even states that "low-emissivity coatings are well known in the present art," page 1, line 13.

Finally, Thiel in view of Cathers disclose that said coated inner surface has a peripheral region that is substantially free of said low-emissivity coating, figures 2-6.

In regard to claim 15, Thiel in view of Cathers disclose the basic claimed invention, wherein said coating is an active photocatalytic coating comprising titanium oxide (a non-silver based coating), abstract and column 11, lines 19-26. The examiner would like to point out that although Thiel does not specifically refer to his coating as an active coating," his coating has the same features as applicant's coating. Therefore, they are both active coatings.

In regard to claims 45 and 54, Thiel in view of Cathers disclose the basic claimed invention except for specifically disclosing that said photocatalytic coating has a thickness of about 500 Angstroms or less. However, it has been held that where the general conditions of a claim are disclosed in the prior art discovering the optimum or workable ranges involves only routine skill in the art. Therefore, to make the coating of Thiel's window within the above range would have been obvious to one having ordinary

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skill in the art at the time the invention was made since the applicant has not disclosed that said thickness is critical to the claimed invention.

In regard to claims 46-49, Thiel in view of Cathers discloses the claimed invention, wherein said coating-free peripheral region on coated outer surface extends a distance inwardly from an edge of the pane that bears said functional coating, said distance being defined as an edge-deletion width, the edge-deletion width being a predetermined width that is uniform along all sides of said coated outer surface. Thiel and Cathers do not specifically disclose that said width is less than about 1 inch or  $\frac{1}{2}$  inch. However, it has been held that where the general conditions of a claim are disclosed in the prior art discovering the optimum or workable ranges involves only routine skill in the art. Therefore, to make the edge deletion width of Thiel's window within the above range would have been obvious to one having ordinary skill in the art at the time the invention was made since the applicant has not disclosed that said width is critical to the claimed invention.

In regard to claim 50, Thiel in view of Cathers do not specifically disclose that each pane is a soda-lime glass substrate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a soda-lime glass substrate for the panes, because soda-lime glass is a known glass in the window art as admitted on page 8 of applicant's specification. Therefore, to select a known glass for a window would be within the general skill of a worker in the window art.

In regard to claim 51, Thiel in view of Cathers disclose the basic claimed invention except for specifically disclosing the use of a sputtered coating. However,

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Thiel does teach the use of a wide variety of coatings applied to windows. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to place a known coating on a window to produce the desired effect.

Furtehr, the method of application does not have to be met to meet the product claim.

In regard to claim 52, Thiel in view of Cathers disclose the basic claimed invention, wherein the functional coating is a hydrophilic coating.

7. Claims 18-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiel (5,873,203) in view of Cathers (4,587,769) and further Bobel (2,723,427).

In regard to claim 18, Thiel in view of Cathers disclose the basic claimed invention except for specifically disclosing a frame, wherein at least one edge region of the insulating glass unit is received, wherein a bead of glazing compound is disposed between a mounting surface of the frame and said coating-free peripheral region of the insulating glass unit. Bobel teaches that it is known to place a window unit comprising two panes of glass spaced by a spacer in a window frame and to apply a bead of glazing 39 between the frame and the window unit. It would have been obvious to one having ordinary skill in the art at the time the invention was made to place Thiel's window unit in Bobel's frame, because by having the window unit in the frame, it can be mounted in the opening of a building to provide light into the building.

In regard to claims 19 and 20, Thiel in view of Cathers and Bobel disclose the basic claimed invention except for specifically disclosing that said glazing compound comprises an organic material. Thiel teaches the use of polyisobutylene

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adhesive/sealant. Said adhesive/sealant comprises at least one organic compound, for example water. Said adhesive/sealant will also provide an excellent seal against water.

8. Applicant's arguments filed 06/29/06 have been fully considered but they are not persuasive.

As best understood Thiel provides the outer surface coating now claimed as Thiel teaches the coating of claims 14 and 15 which depend from 12 and since Thiel provides the coating of claims 14 and 15 it inherently must meet that of claim 12.

Applicant's arguments that there is no teaching or suggestion of removing any type of film from an exterior surface of pane of glass and that there is no reason to remove the non-silver based outer coating of Thiel are not found persuasive.

One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Thiel has been relied upon for teaching the

structure and coatings. Cathers has been relied upon for the generic teaching that at the time of the invention it was know to remove a coating on a glass pane along to periphery of the pane to help with adhesion between the glass pane and the window frame by eliminating any reaction, which may take place between the coating and the adhesives used.



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Applicant's argument that Cathers teachings only reflect that it is desirable to get rid of the easily-corrodible metal film and not the base of the film is not found persuasive. This is not taught specifically anywhere in Cathers. Cathers in fact recites that the grinding wheel should be sufficiently abrasive to remove the film without significantly affecting the glass. It does state anything about only removing a portion of the film. It recites "to remove the film".

Applicant's argument that there is no reason or motivation for edge deleting an exterior non-silver based coating is not found persuasive. The motivation is the same no matter what the coating "it is desirable to remove a portion of the film along the perimeter of the coated glass surface where sealants or adhesives are applied in order to provide direct contact with the glass to prevent reaction with the film". This suggests to one of ordinary skill in the art that anywhere a glass pane is going to come into contact with a sealant or adhesive the desirability to remove a coating thereon, even more specifically a metal oxide coating.

One having ordinary skill in the art would be capable of taking the teachings of Thiel and Cathers to produce applicant's claimed device.

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9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

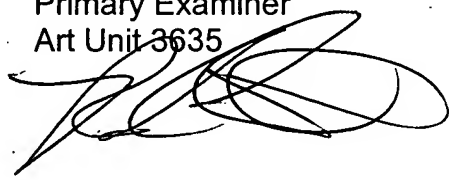
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert J. Canfield whose telephone number is 571-272-6840. The examiner can normally be reached on M-Th.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl Friedman can be reached on 571-272-6842. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert J Canfield  
Primary Examiner  
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A handwritten signature in black ink, appearing to be 'R. Canfield', written over the printed name and title.

12/16/06